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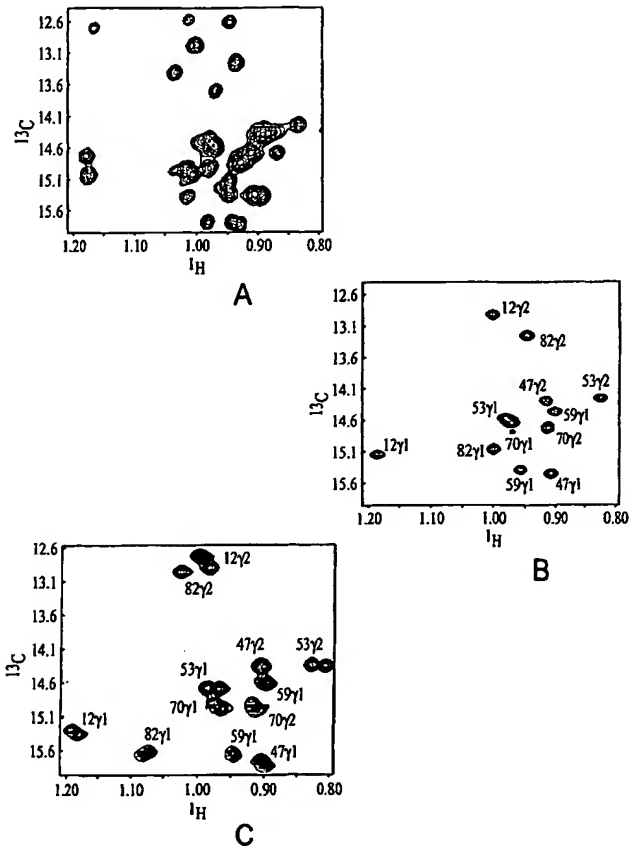
(54) Title: METHOD FOR OBTAINING DYNAMIC AND STRUCTURAL DATA PERTAINING TO PROTEINS AND PROTEIN/LIGAND COMPLEXES



(57) Abstract: This invention provides an NMR method for obtaining both entropic and enthalpic data on proteins and protein/ligand complexes which can be used to obtain accurate structural and dynamic data of proteins and protein complexes having a wide range of molecular weights. An embodiment of the invention provides proteins which contain at least one bond vector whose dynamics are to be measured and which is surrounded by NMR inactive nuclei, and amino acids for synthesis of the proteins via chemical means or biological expression. The NMR methods using specifically labeled proteins for analysis result in maximization of the sensitivity and resolution of the NMR experiments, and minimization of the loss of signal due to diffusion.

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